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Wage Inequalities Between Male and Female Graduates in Morocco: Analysis of Determinants and Prospects for an Inclusive Labor Market

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Abstract

This article analyzes the pay gap between male and female higher education graduates in Morocco. The main objective is to explore the causes of pay inequalities and assess the impact of observable characteristics on these gaps.

The results show a total pay gap of 48.3% in favor of men. Around 40.9% of this difference can be attributed to observable characteristics such as education and experience, while 7.4% remains unexplained, suggesting systemic discrimination. The Oaxaca-Blinder decomposition method reveals that marital status and sector of activity influence these disparities.

Percentile analysis highlights that wage inequalities are more marked in the lower income brackets. This indicates that women suffer from prejudice in high-paying professions. Discussion of the results highlights the need for policy initiatives to combat gender norms and stereotypes, promote equal pay and support women's access to fair employment.

The article underlines the importance of a multi-dimensional approach to tackling pay inequalities. It calls for better regulation of public policies and concrete measures to reduce these gaps.

Key words: **Wage discrimination; Gender equality; Wage gaps; Higher education graduates; Oaxaca-Blinder**

I. INTRODUCTION

Wage inequality for female higher education graduates in Morocco represents a major moral and economic challenge. Despite progress in school enrolment and access to quality education, they suffer from disparities in the labour market. This phenomenon is not limited to the pay gap, but is influenced by factors such as job market segmentation, career choices influenced by gender stereotypes and systemic barriers. The aim of this work is to examine inequalities, using quantitative and qualitative data analysis, to break down the pay gap and study relevant cases. The aim is to formulate practical and strategic recommendations to promote gender equality in the Moroccan market and improve the position of women graduates. This research highlights the importance of a multidimensional approach and the concerted commitment of all social, economic and political players in the fight against these inequalities.

II. REVIEW OF THE LITERATURE ON PAY INEQUALITY

The literature on gender pay inequalities highlights the persistence of wage gaps in Morocco. Research [1] indicates that these disparities are influenced by both observable and unobservable factors. Job characteristics differ, as women are more often employed part-time and in lower-paying positions [2]. In addition, cultural norms and gender stereotypes restrict access to higher-paid careers and exacerbate pay biases [3].

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To understand these inequalities, a multidimensional approach is essential. It must take account of career choices, interruptions due to maternity [4], and gender gaps in education and experience [5]. Some studies point out that institutional policies and work practices contribute to the increase in wage inequalities, even with legislative measures to reduce them [6]. Despite some progress, results remain modest, especially between graduate and non-graduate women [7].

This research highlights the need for targeted strategies to integrate economic and socio-cultural solutions in the fight against wage inequality. It calls for mobilization between social and political players [8].

III. WAGE DECOMPOSITION MODELS

Wage decomposition models, such as the Oaxaca-Blinder method [9], are crucial for assessing gender pay gaps. They quantify the proportion of the wage gap attributable to observable characteristics, such as level of education, work experience and sector of activity.

In a detailed study, the researchers decompose the wage gap on the basis of salary averages and percentiles, in particular the 10th, 50th (median) and 90th percentiles. This enables us to understand pay differences at various levels.

This approach highlights wage inequalities at the mean and specific dynamics at the extremes of the distribution. However, these models, while informative, do not capture all aspects of systemic discrimination contributing to inequality. A comprehensive approach is needed to understand and address these gaps.

IV. EMPIRICAL RESULTS AND DISCUSSION

The database comes from surveys on the professional integration of graduates conducted annually since 2011 by Hassan 1er University in Settat in collaboration with the Instance Nationale d'Evaluation attached to the Conseil Supérieur de l'Education, de la Formation et de la Recherche Scientifique. The results were based on a sample of 2525 graduates from the university. (cf. appendix 1)

Analysis of salary inequality between male and female higher education graduates in Morocco reveals significant disparities by salary percentile and average.

Analysis of pay inequality for female graduates at the average reveals a total pay gap of 48.3% in favor of men, a statistically significant difference ($p < 0.01$).

Of this gap, 40.9% is attributable to observable characteristics such as social security affiliation, sector of employment and professional experience. Social security affiliation accounted for 9.1% of the wage difference. Sector of employment, particularly the public sector, accounts for 17.1% of the difference in favor of men. Professional experience accounts for 87% of the explained share, with a negative effect at the outset but a positive one over time (cf. appendix 2).

However, 7.4% of the wage gap remains unexplained, suggesting the existence of discrimination or unobserved factors. Among these factors, marital status contributes 5.8% of the unexplained difference, while location in Casablanca-Settat reduces the wage gap by 12.6%.

Analysis by percentile reveals different dynamics according to salary level. At the 10^{e} centile, the explained portion of the wage gap is very low, suggesting that observable characteristics (experience, education, sector...) contribute little to the pay difference. The unexplained portion is larger, indicating that unobserved factors, such as discrimination, play a key role (see Appendix 3).

To assess the overlap between men's and women's overall wage distributions, we plot their univariate densities (cf. Figure 1). This graph shows how the wages of the two groups overlap. When the density curves overlap a lot, this indicates that men's and women's wages are similar. The log wage probability densities (LnSAL) of men (blue curve) and women (red curve) are estimated using kernel functions. The analysis shows a significant overlap, suggesting a similar distribution between the two groups.

Figure 1 - Densities of the logarithm of monthly wages for men and women separately, (“kernel densities”)

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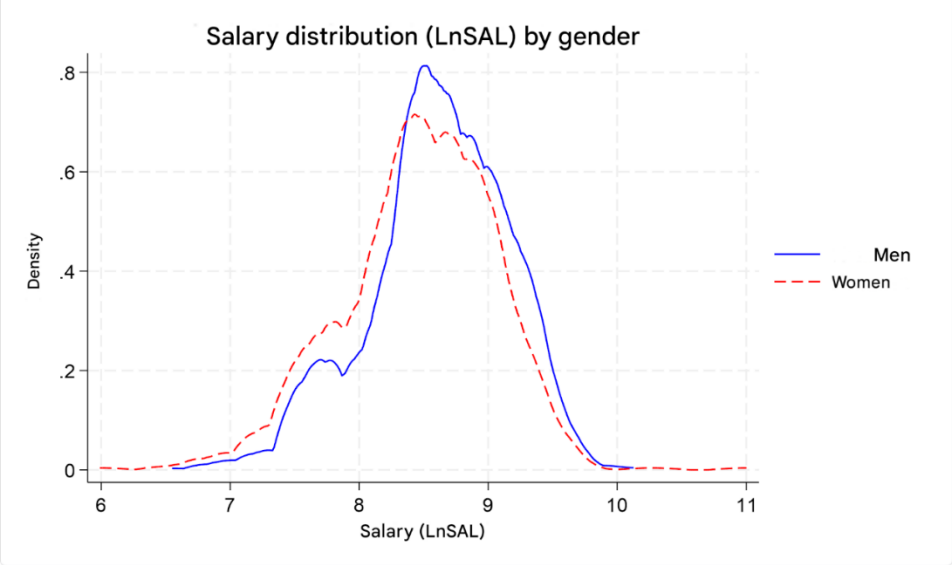

Source: Compiled by the authors

At the 50e percentile, the total wage gap reaches 8.61%. This figure includes 43% that can be attributed to observable variables such as experience and establishment. Belonging to establishment ETAB_3 (FEG) contributes 1.12% of the gap. However, 57% of the difference remains unexplained, suggesting discrimination or other unmeasured factors. (see appendix 4)

At the 90e percentile, the wage gap between men and women is 3.76%. An explained share of 2.71% is due to observable characteristics, such as experience, seniority, industry and age. The unexplained share is 1.04%, indicating that differences influence salaries. (see appendix 5)

Analysis of the Oaxaca-Blinder decomposition shows that social security affiliation (AFF_1) and ENSA membership (ETAB_1) do not affect the wage difference. On the other hand, ETAB_3 (FEG) has a significant and positive effect on women's wages (1.12%, p = 0.021).

Concerning the correction for selection bias, the Mills inverse has no significant effect (0.0272, p =0.749). This suggests that the bias does not affect the unexplained wage difference between men and women.

The study reveals heterogeneity in the gender wage gap across salary levels. At low wages (10e centile), the unexplained share is significant, suggesting a role for discrimination. At intermediate (50e centile), more than half remains unexplained, highlighting unmeasured factors. Finally, at the high (90e centile), most of the gap is attributed to observable characteristics, and the share becomes marginal. This indicates that inequalities are more pronounced at the lowest levels, while at the higher ones, they are justified by differences in characteristics.

This article analyzes the mechanisms of wage inequality for female higher education graduates in Morocco, drawing on several economic and sociological theories. Becker's theory of preference discrimination [10] highlights the persistence of sexist prejudices, explaining why, for equal qualifications, women earn less than men. Lundberg and Startz [11] and Brinch [12] show that expectations of discrimination influence women's educational and occupational choices, steering them towards lower-paying sectors. Ruwanpura [13] highlights multiple discrimination, where factors such as social origin amplify these inequalities.

The study reveals a wage gap of 22%, 91% of which is attributed to gender discrimination. Marouani and Robalino [14] point out that the Moroccan labor market is segmented, confining women to occupations with low economic value, limiting their wage progression.

The results show that conventional economic models are not sufficient to explain the persistence of these gaps, requiring an integrative approach. The study calls for policies to promote pay transparency and women's access

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to under-represented sectors. It stresses the need for longitudinal and comparative studies to understand the evolution of inequalities and propose appropriate solutions.

V. CONCLUSION

This article analyzes pay disparities between men and women using the Oaxaca-Blinder method, highlighting the extent and mechanisms of pay inequalities. The results reveal a total gap of 48.3% in favor of men. Of this gap, 40.9% can be explained by observable characteristics such as experience, sector of activity and social insurance, while 7.4% remains unexplained, reflecting systemic discrimination based on gender stereotypes and sexist biases.

Analysis by percentile shows that women in lower-skilled jobs (10th percentile) are penalized the most, reinforcing the segmentation of the labor market. At the 90th percentile, the pay gap is less marked, suggesting better recognition of qualifications and experience at this level.

The study highlights the role of stereotypes and women's career choices in perpetuating inequality. It stresses that education alone is not enough to reduce the pay gap, and calls for public policies and reforms to reinforce transparency, sector mix and equal opportunities in recruitment and promotion. These measures are essential to ensure greater inclusion of women graduates and to foster a more equitable society.

Appendices

Appendix 1: Coding of Modalities for Variables Used

Variables	Variable Type	Abbreviation	Coding	Modalities
Education (number of years of study) - EDUC	Quantitative variable	EDUC	2 3 4 5 8	DUT, BTS (Licence Fondamentale, Licence professionnelle and Licence Sciences et Techniques) Master's degree FST (ENCG degree, Engineering degree, Research Master's degree and Specialized Masters) Doctorate
Professional experience (in years) - EXP	Quantitative variable	EXP	-	-
Gender - GEN	Indicator variable	GEN-H GEN-F	0 1	Male Female
Skills - COMP	Indicator variable	COMP-0 COMP-1 COMP-2 COMP-3 COMP-4 COMP-5 COMP-6	0 1 2 3 4 5 6	Analytical thinking Specific and general skills Communication skills Ability to innovate and deal with new things, computer hardware, etc. Ability to be “executive” at work Ability to work in a group Ability to master foreign languages and write reports (with Weak modality, and Strong modality)
Marital status - STAT	Indicator variable	STAT-C STAT-M STAT-A	0 1 2	Single Married Other
Sector of activity - SEC	Indicator variable	SEC-P SEC-S SEC-T SEC-Q	0 1 2 3	Primary Secondary Tertiary Quaternary
Age (in years) - AGE	Quantitative variable	AGE	-	-
Establishment - ETAB	Indicator variable	ETAB- ENCG ETAB-ENSA ETAB-ESTB ETAB-FEG ETAB-FPK	0 1 2 3 4	ENCG ENSA ESTB FEG FPK

ISSN: 2961-6611

		ETAB-FSJP ETAB-FST	5 6	FSJP FST
Type of contract - CONTR	Indicator variable	CONTR-F CONTR-CDI CONTR-CDD CONTR-I CONTR-ANAPEC CONTR-TP CONTR-A	0 1 2 3 4 5 6	Civil servant CDI CDD Temporary ANAPEC contract Part-time Other
Social security affiliation - AFF	Indicator variable	AFF-0 AFF-1	0 1	No Yes
Place of employment - LIEU	Indicator variable	LIEU-0 LIEU-1	0 1	Other regions Casablanca-Settat region
Legal sector - SECJ	Indicator variable	SECJ-P SECJ-PU	0 1	Private Public
Establishment size - TAILLE	Indicator variable	TAILLE-P TAILLE-M TAILLE-G	0 1 2	Small Medium Large
Parents' level of education (father - NIP, mother - NIM)	Instrumental variable	NIP-A NIP-P NIP-C NIP-L NIP-S	0 1 2 3 4	None Primary Middle school High school Higher education
Parents' socio-professional category (father - CSPP, mother - CSPM)	Instrumental variable	CSP-C CSP-E CSP-CO CSP-O	0 1 2 3	Executive Employee or civil servant Shopkeeper Worker and unemployed

Source: Compiled by the authors

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Appendix 2 : Analysis of the Average Wage Difference Between Men and Women Using the Oaxaca-Blinder Method	Appendix 3: Analysis of the Difference in Log Wages at the 10th Percentile Between Men and Women Using the Oaxaca-Blinder Method

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Blinder-Oaxaca decomposition — Number of obs = 2,525; Model = linear
Group 1: GEN = 0 — N of obs 1 = 1,379
Group 2: GEN = 1 — N of obs 2 = 1,146

explained: (X1 - X2) * **b**
unexplained: X1 * (b1 - **b**) + X2 * (**b** - b2)
with **b** from pooled model (including group dummy)

LnSAL	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
overall						
group_1	5.43142	.1124988	48.28	0.000	5.210926	5.651913
group_2	4.948343	.1239645	39.92	0.000	4.705377	5.191309
difference	.4830765	.1674013	2.89	0.004	.1549761	.8111769
explained	.4087678	.1636228	2.50	0.012	.0880731	.7294625
unexplained	.0743087	.0387447	1.92	0.055	-.0016295	.1502469
explained						
AFF_1	.0908885	.032523	2.79	0.005	.0271445	.1546325
ETAB_1	-.0005657	.002117	-0.27	0.789	-.0047149	.0035835
ETAB_2	-.0020375	.0023022	-0.89	0.376	-.0065498	.0024748
ETAB_3	-.0005284	.0040522	-0.13	0.896	-.0084705	.0074137
ETAB_4	-.0045946	.0046148	-1.00	0.319	-.0136394	.0044502
ETAB_5	.0104951	.0068579	1.53	0.126	-.0029461	.0239363
ETAB_6	.011934	.0075617	1.58	0.115	-.0028866	.0267545
STAT_1	.0003752	.0010719	0.35	0.726	-.0017256	.002476
STAT_2	.000154	.0011183	0.14	0.890	-.0020379	.0023458
SECJ_1	.1707521	.0573028	2.98	0.003	.0584407	.2830635
SEC_1	.0149452	.0125591	1.19	0.234	-.0096702	.0395606
SEC_2	.0616627	.0322787	1.91	0.056	-.0016024	.1249278
SEC_3	-.0016737	.0042227	-0.40	0.692	-.00995	.0066026
CONTR_1	-.0074071	.0693128	-0.11	0.915	-.1432577	.1284435
CONTR_2	.0153333	.0516554	0.30	0.767	-.0859094	.1165759
CONTR_3	.0190224	.015675	1.21	0.225	-.0117001	.0497448
CONTR_4	-.0604172	.0373128	-1.62	0.105	-.133549	.0127147
CONTR_5	.0019387	.0146645	0.13	0.895	-.0268031	.0306806
CONTR_6	-.0198352	.0392707	-0.51	0.613	-.0968044	.057134
LIEU_1	.0154663	.0105989	1.46	0.145	-.0053073	.0362398
TAILLE_1	-.000249	.010997	-0.02	0.982	-.0218027	.0213046
TAILLE_2	-.0061664	.0051949	-1.19	0.235	-.0163483	.0040154
EXP	-.8826949	.2348856	-3.76	0.000	-1.343062	-.4223276
EXP2	.8703587	.2317961	3.75	0.000	.4160468	1.324671
AGE	-.0049118	.0096422	-0.51	0.610	-.0238102	.0139866
F1	.0006026	.0050153	0.12	0.904	-.0092273	.0104325
F2	.0004377	.0028146	0.16	0.876	-.0050788	.0059542
F3	.0009175	.0019885	0.46	0.645	-.0029799	.0048149
F4	-.000711	.001215	-0.59	0.558	-.0030924	.0016704
F5	.0010085	.0015494	0.65	0.515	-.0020282	.0040453
F6	-.000669	.0011691	-0.57	0.567	-.0029605	.0016225
F7	-.0001343	.000543	-0.25	0.805	-.0011986	.0009301
F8	.0006864	.0014279	0.48	0.631	-.0021122	.0034851
F9	-.0002152	.0025202	-0.09	0.932	-.0051547	.0047243
F10	.0015852	.0019271	0.82	0.411	-.0021919	.0053622
EDUC_predic~d	.0416827	.0243441	1.71	0.087	-.0060309	.0893962
mills_inverse	.071332	.0178524	4.00	0.000	.0363418	.1063221
unexplained						
AFF_1	.0077706	.1383504	0.06	0.955	-.2633913	.2789325
ETAB_1	.009384	.0065669	1.43	0.153	-.0034869	.0222549
ETAB_2	.0003712	.0153271	0.02	0.981	-.0296694	.0304118
ETAB_3	.0262112	.0421145	0.62	0.534	-.0563318	.1087541
ETAB_4	-.0066054	.0369705	-0.18	0.858	-.0790663	.0658555
ETAB_5	.00635	.0552777	0.11	0.909	-.1019923	.1146923
ETAB_6	.0155337	.0673206	0.23	0.818	-.1164123	.1474797
STAT_1	.0576591	.0263328	2.19	0.029	.0060477	.1092705
STAT_2	.0005845	.0034565	0.17	0.866	-.0061901	.007359
SECJ_1	-.0721331	.1006215	-0.72	0.473	-.2693477	.1250814
SEC_1	-.0077394	.0207663	-0.37	0.709	-.0484406	.0329618
SEC_2	-.0293075	.0895725	-0.33	0.744	-.2048663	.1462514
SEC_3	.0382585	.0316354	1.21	0.227	-.0237458	.1002627
CONTR_1	-.1764108	.138937	-1.27	0.204	-.4487223	.0959007
CONTR_2	-.0466548	.0543161	-0.86	0.390	-.1531124	.0598028
CONTR_3	-.0083841	.0059088	-1.42	0.156	-.0199652	.0031969
CONTR_4	-.013664	.0244825	-0.56	0.577	-.0616488	.0343209
CONTR_5	-.0033976	.0060267	-0.56	0.573	-.0152097	.0084144
CONTR_6	.0059922	.0243647	0.25	0.806	-.0417618	.0537462
LIEU_1	-.1262766	.0649574	-1.94	0.052	-.2535909	.0010376
TAILLE_1	.0471631	.0531432	0.89	0.375	-.0569957	.1513218
TAILLE_2	.0055426	.0141644	0.39	0.696	-.022219	.0333043
EXP	9.682938	19.31519	0.50	0.616	-28.17414	47.54001
EXP2	-4.92318	10.15743	-0.48	0.628	-24.83138	14.98502
AGE	-.426088	.3709749	-1.15	0.251	-1.153186	.3010095
F1	.0000287	.0004305	0.07	0.947	-.000815	.0008725
F2	.0000522	.0010952	0.05	0.962	-.0020944	.0021988
F3	-.0001415	.0006142	-0.23	0.818	-.0013453	.0010623
F4	-.0001454	.0005136	-0.28	0.777	-.0011521	.0008613
F5	.0001069	.0004626	0.23	0.817	-.0007999	.0010136
F6	-.0005573	.0012938	-0.43	0.667	-.003093	.0019784
F7	.0000465	.0002032	0.23	0.819	-.0003518	.0004448
F8	.0001943	.0011753	0.17	0.869	-.0021092	.0024979
F9	-.0016755	.0018098	-0.93	0.355	-.0052226	.0018715
F10	-.000618	.00074	-0.84	0.404	-.0020685	.0008325
EDUC_predic~d	.4714925	.481809	0.98	0.328	-.4728357	1.415821
mills_inverse	.0756038	.1970666	0.38	0.701	-.3106397	.4618473
_cons	-4.533995	9.454506	-0.48	0.632	-23.06449	13.9965

Blinder-Oaxaca decomposition — Number of obs = 1,540; Model = linear
Group 1: GEN = 0 — N of obs 1 = 870
Group 2: GEN = 1 — N of obs 2 = 670

explained: (X1 - X2) * **b**
unexplained: X1 * (b1 - **b**) + X2 * (**b** - b2)
with **b** from pooled model (including group dummy)

RIF10	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
overall						
group_1	.8065947	.0078836	102.31	0.000	.7911431	.8220464
group_2	.7856417	.0107368	73.17	0.000	.764598	.8066854
difference	.020953	.0133203	1.57	0.116	-.0051543	.0470603
explained	.0018351	.0074761	0.25	0.806	-.0128177	.0164879
unexplained	.0191179	.0124106	1.54	0.123	-.0052065	.0434423
explained						
AFF_1	.0063941	.0040419	1.58	0.114	-.0015279	.0143161
ETAB_1	-.0001065	.0003618	-0.29	0.768	-.0008156	.0006026
ETAB_2	-.0009883	.0009123	-1.08	0.279	-.0027764	.0007999
ETAB_3	-.0005231	.0015396	-0.34	0.734	-.0035407	.0024946
ETAB_4	-.0000314	.0001876	-0.17	0.867	-.000399	.0003362
ETAB_5	-.0034132	.0026426	-1.29	0.196	-.0085925	.0017662
ETAB_6	.0021203	.0015589	1.36	0.174	-.0009351	.0051758
STAT_1	.0001257	.0007411	0.17	0.865	-.0013267	.0015782
STAT_2	-.0001993	.0003794	-0.53	0.599	-.0009429	.0005444
SECJ_1	.0156561	.0074683	2.10	0.036	.0010185	.0302937
SEC_1	.0006872	.0011308	0.61	0.543	-.0015292	.0029035
SEC_2	.0014823	.0020419	0.73	0.468	-.0025197	.0054843
SEC_3	.0012878	.001306	0.99	0.324	-.001272	.0038476
CONTR_1	-.0065213	.0052405	-1.24	0.213	-.0167924	.0037498
CONTR_2	-.0010164	.003038	-0.33	0.738	-.0069708	.0049379
CONTR_3	.0014839	.0015201	0.98	0.329	-.0014954	.0044632
CONTR_4	-.0079584	.0043861	-1.81	0.070	-.0165551	.0006382
CONTR_5	-.0000265	.001346	-0.02	0.984	-.0026648	.0026117
CONTR_6	-.0010325	.0014875	-0.69	0.488	-.003948	.001883
LIEU_1	-.000048	.0002553	-0.19	0.851	-.0005483	.0004524
TAILLE_1	-.0032205	.0026766	-1.20	0.229	-.0084666	.0020256
TAILLE_2	-.0024234	.0015666	-1.55	0.122	-.0054939	.0006471
EXP	.029335	.071482	0.41	0.682	-.1107672	.1694372
EXP2	-.0244832	.0717856	-0.34	0.733	-.1651805	.116214
AGE	-.0059611	.0032755	-1.82	0.069	-.0123811	.0004588
F1	-.0000258	.0002178	-0.12	0.906	-.0004526	.000401
F2	.0000583	.0003768	0.15	0.877	-.0006803	.0007968
F3	-.000721	.0007033	-1.03	0.305	-.0020995	.0006576
F4	.000088	.0002584	0.34	0.733	-.0004185	.0005945
F5	.0002967	.0004586	0.65	0.518	-.0006021	.0011955
F6	.000393	.0004974	0.79	0.429	-.0005819	.001368
F7	-.0001478	.0005198	-0.28	0.776	-.0011666	.0008709
F8	.000252	.0005171	0.49	0.626	-.0007616	.0012656
F9	.0004819	.0008234	0.59	0.558	-.0011319	.0020957
F10	.0003448	.0005504	0.63	0.531	-.0007339	.0014235
EDUC_predic~d	-.0035144	.0022574	-1.56	0.120	-.0079387	.0009099
mills_inverse	.0037101	.0033702	1.10	0.271	-.0028953	.0103156
unexplained						
AFF_1	-.0775655	.0519273	-1.49	0.135	-.1793411	.0242101
ETAB_1	.001282	.0018351	0.70	0.485	-.0023147	.0048787
ETAB_2	.0005024	.0028605	0.18	0.861	-.0051041	.0061088
ETAB_3	-.014969	.010546	-1.42	0.156	-.0356387	.0057007
ETAB_4	-.0098904	.008822	-1.12	0.262	-.0271812	.0074004
ETAB_5	.0007504	.0103183	0.07	0.942	-.019473	.0209739
ETAB_6	-.0013926	.0147435	-0.09	0.925	-.0302892	.0275041
STAT_1	.015589	.0078795	1.98	0.048	.0001454	.0310326
STAT_2	.0017021	.0013587	1.25	0.210	-.0009609	.0043652
SECJ_1	-.0288275	.0362904	-0.79	0.427	-.0999554	.0423003
SEC_1	-.0114267	.0081205	-1.41	0.159	-.0273425	.0044892
SEC_2	.0023485	.0328983	0.07	0.943	-.0621309	.066828
SEC_3	.0047763	.0103166	0.46	0.643	-.0154438	.0249964
CONTR_1	-.0343948	.0519074	-0.66	0.508	-.1361314	.0673418
CONTR_2	-.0153702	.022655	-0.68	0.497	-.0597733	.0290329
CONTR_3	-.0006348	.0025666	-0.25	0.805	-.0056652	.0043956
CONTR_4	-.0027446	.0105843	-0.26	0.795	-.0234894	.0180003
CONTR_5	.0020536	.0023059	0.89	0.373	-.0024659	.006573
CONTR_6	-.0053788	.0116337	-0.46	0.644	-.0281804	.0174228
LIEU_1	-.0404887	.0214543	-1.89	0.059	-.0825384	.001561
TAILLE_1	.0051174	.0191647	0.27	0.789	-.0324447	.0426795
TAILLE_2	.0022118	.0043888	0.50	0.614	-.0063901	.0108137
EXP	10.19491	6.996849	1.46	0.145	-3.518659	23.90849
EXP2	-5.470779	3.689018	-1.48	0.138	-12.70112	1.759563
AGE	.0120056	.0842777	0.14	0.887	-.1531758	.1771869
F1	8.49e-06	.0003751	0.02	0.982	-.0007268	.0007438
F2	.0000214	.0003235	0.07	0.947	-.0006127	.0006555
F3	.0002628	.0005253	0.50	0.617	-.0007667	.0012923
F4	-.0000231	.0002465	-0.09	0.925	-.0005063	.00046
F5	-.0001035	.0002256	-0.46	0.646	-.0005458	.0003387
F6	-.0001156	.0003102	-0.37	0.709	-.0007237	.0004925
F7	-4.90e-06	.0000803	-0.06	0.951	-.0001624	.0001525
F8	.0000626	.0002422	0.26	0.796	-.0004121	.0005373
F9	-.0003427	.0005393	-0.64	0.525	-.0013997	.0007144
F10	-.0007003	.0009	-0.78	0.437	-.0024642	.0010637
EDUC_predic~d	-.1575875	.2028809	-0.78	0.437	-.5552268	.2400519
mills_inverse	.0462056	.0469676	0.98	0.325	-.0458491	.1382604
_cons	-4.397955	3.351633	-1.31	0.189	-10.96704	2.171126

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Appendix 4: Analysis of the Difference in Log Wages at the 50th Percentile Between Men and Women Using the Oaxaca-Blinder Method

```
Blinder-Oaxaca decomposition                  Number of obs     =      1,540
                                              Model             =     linear
Group 1: GEN = 0                              N of obs 1        =        870
Group 2: GEN = 1                              N of obs 2        =        670

    explained: (X1 - X2) * b
  unexplained: X1 * (b1 - b) + X2 * (b - b2)
               with b from pooled model (including group dummy)
```

RIF50	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
overall						
group_1	.5409651	.0152659	35.44	0.000	.5110445	.5708857
group_2	.4548459	.0172536	26.36	0.000	.4210294	.4886624
difference	.0861192	.0230377	3.74	0.000	.0409661	.1312723
explained	.0372675	.0144458	2.58	0.010	.0089542	.0655807
unexplained	.0488517	.0204472	2.39	0.017	.008776	.0889275
explained						
AFF_1	.0027337	.0022851	1.20	0.232	-.0017449	.0072124
ETAB_1	-.0003118	.0006105	-0.51	0.610	-.0015083	.0008847
ETAB_2	.0030351	.0022275	1.36	0.173	-.0013308	.007401
ETAB_3	.0111698	.0048319	2.31	0.021	.0016994	.0206401
ETAB_4	-.0010932	.0047905	-0.23	0.819	-.0104824	.0082961
ETAB_5	-.0086716	.0051226	-1.69	0.090	-.0187116	.0013685
ETAB_6	-.0069051	.0042949	-1.61	0.108	-.015323	.0015129
STAT_1	-.0002691	.0013923	-0.19	0.847	-.0029979	.0024597
STAT_2	-.0003822	.0006942	-0.55	0.582	-.0017429	.0009785
SECJ_1	-.0016718	.005194	-0.32	0.748	-.0118519	.0085083
SEC_1	.000183	.0005755	0.32	0.751	-.000945	.001311
SEC_2	-.0014066	.0020825	-0.68	0.499	-.0054882	.0026751
SEC_3	-.000227	.0008445	-0.27	0.788	-.0018821	.0014282
CONTR_1	.0024164	.0039838	0.61	0.544	-.0053916	.0102244
CONTR_2	.0017176	.0051395	0.33	0.738	-.0083557	.0117909
CONTR_3	-.0014054	.0015944	-0.88	0.378	-.0045304	.0017195
CONTR_4	.0083373	.0052188	1.60	0.110	-.0018914	.0185659
CONTR_5	.0000289	.001466	0.02	0.984	-.0028444	.0029022
CONTR_6	.0035477	.0042446	0.84	0.403	-.0047716	.011867
LIEU_1	.000105	.0005531	0.19	0.849	-.000979	.001189
TAILLE_1	-.0000761	.0009799	-0.08	0.938	-.0019967	.0018444
TAILLE_2	.0003476	.0010445	0.33	0.739	-.0016996	.0023948
EXP	-.367062	.1272414	-2.88	0.004	-.6164506	-.1176735
EXP2	.3688892	.1275864	2.89	0.004	.1188244	.618954
AGE	-.0056872	.0063269	-0.90	0.369	-.0180878	.0067133
F1	.0003208	.0026675	0.12	0.904	-.0049073	.005549
F2	.0002806	.0018017	0.16	0.876	-.0032507	.0038119
F3	.0001038	.0010265	0.10	0.919	-.0019081	.0021157
F4	.0002911	.00055	0.53	0.597	-.0007868	.001369
F5	.0003174	.0005768	0.55	0.582	-.0008132	.001448
F6	-.000333	.0006094	-0.55	0.585	-.0015274	.0008614
F7	-.0002267	.0007986	-0.28	0.777	-.0017919	.0013386
F8	.0003128	.0006626	0.47	0.637	-.0009859	.0016115
F9	.0012712	.001398	0.91	0.363	-.0014689	.0040113
F10	.0000915	.0009177	0.10	0.921	-.0017071	.0018901
EDUC_predic~d	.0034014	.0031866	1.07	0.286	-.0028443	.009647
mills_inverse	.0240945	.0078043	3.09	0.002	.0087983	.0393907
unexplained						
AFF_1	-.0571997	.0806115	-0.71	0.478	-.2151952	.1007959
ETAB_1	.0021849	.0028201	0.77	0.438	-.0033424	.0077122
ETAB_2	.0037943	.0053186	0.71	0.476	-.00663	.0142186
ETAB_3	.0061987	.0189975	0.33	0.744	-.0310357	.0434332
ETAB_4	-.0134253	.0160062	-0.84	0.402	-.0447969	.0179464
ETAB_5	-.0109382	.0196394	-0.56	0.578	-.0494307	.0275543
ETAB_6	.0207059	.0281735	0.73	0.462	-.0345131	.0759249
STAT_1	.0053043	.0145631	0.36	0.716	-.0232389	.0338475
STAT_2	.0020955	.0017502	1.20	0.231	-.0013349	.0055258
SECJ_1	-.0018519	.065918	-0.03	0.978	-.1310488	.127345
SEC_1	-.0156095	.0132181	-1.18	0.238	-.0415165	.0102974
SEC_2	-.0385722	.055882	-0.69	0.490	-.1480989	.0709546
SEC_3	-.0128144	.0135948	-0.94	0.346	-.0394598	.0138309
CONTR_1	-.0385315	.1000657	-0.39	0.700	-.2346566	.1575936
CONTR_2	-.0241895	.0423501	-0.57	0.568	-.1071942	.0588152
CONTR_3	-.0009409	.0041553	-0.23	0.821	-.0090852	.0072034
CONTR_4	-.0123145	.0195322	-0.63	0.528	-.0505969	.0259679
CONTR_5	-.0000418	.003124	-0.01	0.989	-.0061647	.006081
CONTR_6	-.0083791	.0197452	-0.42	0.671	-.047079	.0303208
LIEU_1	.0173847	.038076	0.46	0.648	-.0572429	.0920124
TAILLE_1	.0108569	.0266194	0.41	0.683	-.0413162	.0630301
TAILLE_2	-.0006348	.007364	-0.09	0.931	-.0150679	.0137984
EXP	5.75661	11.25118	0.51	0.609	-16.2953	27.80852
EXP2	-3.33025	5.935673	-0.56	0.575	-14.96395	8.303455
AGE	-.1125956	.1812906	-0.62	0.535	-.4679186	.2427274
F1	.0000116	.0003939	0.03	0.976	-.0007604	.0007837
F2	2.26e-06	.0000522	0.04	0.965	-.0001	.0001045
F3	-.000174	.0004142	-0.42	0.674	-.0009857	.0006378
F4	6.52e-06	.0003923	0.02	0.987	-.0007624	.0007754
F5	-.0000302	.000464	-0.07	0.948	-.0009396	.0008792
F6	.000309	.0005728	0.54	0.590	-.0008137	.0014316
F7	.000057	.000829	0.07	0.945	-.0015677	.0016818
F8	.0000702	.0002561	0.27	0.784	-.0004317	.0005721
F9	-.0001603	.0005686	-0.28	0.778	-.0012747	.0009541
F10	.000218	.0005683	0.38	0.701	-.0008958	.0013317
EDUC_predic~d	-.0506544	.3935531	-0.13	0.898	-.8220042	.7206955
mills_inverse	.0271997	.0848503	0.32	0.749	-.1391039	.1935033
_cons	-2.07485	5.415212	-0.38	0.702	-12.68847	8.53877

Appendix 5: Analysis of the Difference in Log Wages at the 90th Percentile Between Men and Women Using the Oaxaca-Blinder Method

```
Blinder-Oaxaca decomposition                  Number of obs     =      1,540
                                              Model             =     linear
Group 1: GEN = 0                              N of obs 1        =        870
Group 2: GEN = 1                              N of obs 2        =        670

    explained: (X1 - X2) * b
  unexplained: X1 * (b1 - b) + X2 * (b - b2)
               with b from pooled model (including group dummy)
```

RIF90	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
overall						
group_1	.1942189	.0103031	18.85	0.000	.1740252	.2144125
group_2	.1566436	.0091703	17.08	0.000	.1386702	.174617
difference	.0375753	.013793	2.72	0.006	.0105414	.0646091
explained	.027142	.0071507	3.80	0.000	.0131268	.0411573
unexplained	.0104332	.0129435	0.81	0.420	-.0149356	.035802
explained						
AFF_1	-.0049443	.0032244	-1.53	0.125	-.011264	.0013754
ETAB_1	.0004513	.0006994	0.65	0.519	-.0009194	.0018221
ETAB_2	.0001698	.0007098	0.24	0.811	-.0012214	.001561
ETAB_3	.0040994	.0025248	1.62	0.104	-.000849	.0090479
ETAB_4	-.0003546	.0015592	-0.23	0.820	-.0034105	.0027014
ETAB_5	-.004879	.0039214	-1.24	0.213	-.0125648	.0028067
ETAB_6	-.0037286	.0025856	-1.44	0.149	-.0087962	.001339
STAT_1	.0015592	.001252	1.25	0.213	-.0008946	.0040129
STAT_2	-.0000311	.0002133	-0.15	0.884	-.0004493	.000387
SECJ_1	-.0181811	.0089114	-2.04	0.041	-.0356472	-.000715
SEC_1	-.0009952	.0016143	-0.62	0.538	-.0041591	.0021687
SEC_2	-.0027012	.0036495	-0.74	0.459	-.0098541	.0044518
SEC_3	.0006713	.0007887	0.85	0.395	-.0008745	.002217
CONTR_1	.0107603	.0085048	1.27	0.206	-.0059088	.0274293
CONTR_2	.0026391	.0078378	0.34	0.736	-.0127227	.018001
CONTR_3	-.0024983	.0024666	-1.01	0.311	-.0073328	.0023361
CONTR_4	.0105533	.0058364	1.81	0.071	-.0008859	.0219925
CONTR_5	.0000358	.0018151	0.02	0.984	-.0035217	.0035933
CONTR_6	.0046906	.0054003	0.87	0.385	-.0058938	.0152749
LIEU_1	.0001799	.0009277	0.19	0.846	-.0016384	.0019982
TAILLE_1	.0025499	.0021445	1.19	0.234	-.0016531	.006753
TAILLE_2	.0004169	.0008331	0.50	0.617	-.001216	.0020498
EXP	-.1239119	.0747442	-1.66	0.097	-.2704078	.022584
EXP2	.121809	.0748173	1.63	0.104	-.0248302	.2684483
AGE	.0163566	.0057967	2.82	0.005	.0049954	.0277179
F1	.0000809	.0006747	0.12	0.905	-.0012415	.0014034
F2	.0000432	.0002829	0.15	0.879	-.0005112	.0005977
F3	.000329	.0006992	0.47	0.638	-.0010415	.0016994
F4	-.0001975	.0003555	-0.56	0.578	-.0008942	.0004992
F5	.0000869	.0002687	0.32	0.746	-.0004396	.0006135
F6	.0004428	.0005557	0.80	0.426	-.0006464	.0015319
F7	.0001929	.0006759	0.29	0.775	-.0011319	.0015176
F8	-.0000727	.0002287	-0.32	0.751	-.0005209	.0003755
F9	-.0002506	.0008322	-0.30	0.763	-.0018817	.0013805
F10	.000317	.0006386	0.50	0.620	-.0009347	.0015687
EDUC_predic~d	.0104975	.0058411	1.80	0.072	-.0009509	.0219458
mills_inverse	.0009555	.0037411	0.26	0.798	-.0063769	.008288
unexplained						
AFF_1	-.0825292	.0603588	-1.37	0.172	-.2008302	.0357717
ETAB_1	.0013905	.0027111	0.51	0.608	-.0039232	.0067042
ETAB_2	.0020486	.0030871	0.66	0.507	-.0040021	.0080993
ETAB_3	.0113005	.013494	0.84	0.402	-.0151473	.0377483
ETAB_4	.005149	.0101228	0.51	0.611	-.0146913	.0249894
ETAB_5	.017122	.0138867	1.23	0.218	-.0100953	.0443394
ETAB_6	.0043623	.0212594	0.21	0.837	-.0373053	.04603
STAT_1	.0158196	.0104694	1.51	0.131	-.0047001	.0363394
STAT_2	.000395	.0010488	0.38	0.706	-.0016606	.0024506
SECJ_1	-.0572033	.0523483	-1.09	0.275	-.159804	.0453975
SEC_1	-.0008308	.0093217	-0.09	0.929	-.019101	.0174395
SEC_2	-.0387283	.0462061	-0.84	0.402	-.1292905	.0518339
SEC_3	-.0032537	.0090168	-0.36	0.718	-.0209264	.0144189
CONTR_1	-.1058772	.0800564	-1.32	0.186	-.2627847	.0510304
CONTR_2	-.0465784	.0340152	-1.37	0.171	-.113247	.0200902
CONTR_3	-.0043222	.0029344	-1.47	0.141	-.0100735	.0014292
CONTR_4	-.0221418	.0162532	-1.36	0.173	-.0539975	.0097138
CONTR_5	-.0027257	.00259	-1.05	0.293	-.0078019	.0023505
CONTR_6	-.0249634	.016576	-1.51	0.132	-.0574517	.007525
LIEU_1	-.0136987	.0265816	-0.52	0.606	-.0657976	.0384003
TAILLE_1	.0024143	.0189812	0.13	0.899	-.0347882	.0396168
TAILLE_2	-.0017038	.0057341	-0.30	0.766	-.0129424	.0095348
EXP	-5.887797	6.606131	-0.89	0.373	-18.83558	7.059983
EXP2	3.291246	3.487378	0.94	0.345	-3.543889	10.12638
AGE	-.2244143	.1500919	-1.50	0.135	-.5185891	.0697605
F1	-1.77e-06	.000255	-0.01	0.994	-.0005016	.0004981
F2	-4.68e-06	.0001329	-0.04	0.972	-.0002652	.0002558
F3	.0005452	.0009055	0.60	0.547	-.0012295	.00232
F4	-.0000136	.0001077	-0.13	0.899	-.0002248	.0001975
F5	.0000158	.0002699	0.06	0.953	-.0005132	.0005448
F6	.0000767	.0003053	0.25	0.802	-.0005217	.000675
F7	.0000326	.0003034	0.11	0.914	-.000562	.0006273
F8	-.0000459	.0001402	-0.33	0.743	-.0003207	.0002288
F9	-.0002434	.0003508	-0.69	0.488	-.0009309	.0004442
F10	.0000936	.0002914	0.32	0.748	-.0004776	.0006647
EDUC_predic~d	.5196838	.3435075	1.51	0.130	-.1535785	1.192946
mills_inverse	-.0168965	.0556097	-0.30	0.761	-.1258895	.0920965
_cons	2.672711	3.210724	0.83	0.405	-3.620193	8.965616

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